



41

2838

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

: Confirmation No. 4772

Hideki KISHI et al.

: Docket No. 2002_0210A

Serial No. 10/066,750

: Group Art Unit 2838

Filed February 6, 2002

: Examiner Lawrence W. Luk

RESIDUAL CAPACITY CORRECTION
METHOD FOR BATTERYRECEIVED
MAR 04 2004
THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

RESPONSECommissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action of December 2, 2003. In view of the following representations, the Examiner is respectfully requested to reconsider the merits of the present application.

In the Office Action of May 8, 2003, claims 1, 2, 5, 7, 9 and 10 are again rejected under 35 U.S.C. § 102(b) as being anticipated by van Phuoc et al. (USPN 5,796,239).

This rejection is respectfully traversed for the following reasons.

Claim 1 requires making a count of one cycle each time an accumulated quantity of a charge capacity of a battery reaches a set capacity. Claim 1 also requires decreasing a learning capacity by a specified cycle degradation capacity per charge of the one cycle.

The present invention, as defined in claim 1, is not directed to a residual capacity correction which learns actual battery capacity based on either full discharge capacity value (at which a fully charged battery is completely discharged), or full charge capacity value (at which a fully charged battery is completely charged).

As previously described, the van Phuoc method is similar to the conventional method described in the present specification and clearly does not meet the limitations of independent claims 1 and 7. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

In the statement of the rejection, the Examiner takes the position that:

"van Phuoc et al. shows a residual capacity correction method for a battery comprising: making a count of one cycle each time an accumulated quantity of a charge capacity of a battery reaches a set capacity (refer to col. 30, line 14-40), and decreasing a learning capacity by a specified cycle degradation capacity per charge of the one cycle (refer to col. 7, lines 34-47)."

However, in column 30, lines 15-27, the van Phuoc reference states:

"Whether the FULLY CHARGED status flag is cleared or not, the process continues at steps 625 and 630, where the cycle count number is updated. At step 625, a determination is made as to whether a cycle count flag is cleared, and, whether the capacity has decreased by 15% of nominal capacity. If these two events of step 625 have occurred, then the cycle count register, containing a value of the number of times the battery has been charged or discharged (not shown), will be incremented at step

630 and the cycle count flag will be set. It should be understood that in the preferred embodiment, the cycle count will be incremented whether or not the battery has been fully or partially charged.”

Clearly, the van Phuoc reference does not make “a count of one cycle each time an accumulated quantity of a charge capacity of a battery reaches a set capacity.” Thus, the van Phuoc reference does not meet each and every limitation of claim 1, and cannot anticipate this claim under 35 U.S.C. 102(b).

Further, In the rejection of claims 5 and 7, the Examiner states that:

“van Phuoc et al. shows a decreasing rate of the learning capacity as a keeping degradation capacity while the keeping temperature and a residual capacity of the battery are used as parameters (refer to col. 27, lines 5-50)”.

However, in the text referenced by the Examiner, van Phouc merely discloses a method of detecting EOC (end of charge) of the battery, such as battery temperature raise ratio.

The Examiner further states van Phuoc discloses:

“decreasing, as keeping time passes, the learning capacity by the keeping degradation capacity specified from the temperature and the residual capacity of the battery (see col. 8, lines 29-39).”

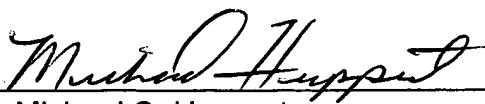
However, col. 8, lines 29-39 of van Phuoc merely discloses a timer. Accordingly, it is submitted that claims 5 and 7 are not anticipated by the van Phuoc reference.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

Hideki KISHI et al.

By: 
Michael S. Huppert
Registration No. 40,268
Attorney for Applicants

MSH/kjf
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
March 2, 2004